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Attorney Docket No. 101769-26

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : BERNHARD MUSSIG
SERIAL NO. : 09/156,886
CUSTOMER NO. : 27384
FILED : September 18, 1998
FOR : SELF-ADHESIVE PROTECTIVE FILM WITH OLEFIN RUBBER
ADHESIVE
ART UNIT : 1733
EXAMINER : J. Goff II

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

APPELLANT'S REPLY BRIEF UNDER 37 CFR § 41.41**SIR:**

Appellant submits the following reply to certain points raised in the Examiner's Answer:

Main claim 37 requires "a copolymer of at least two different α -olefins having at least 2 to 12 carbon atoms and at least one further comonomer, said further comonomer being a diene."

This means that the instant adhesive composition must contain at least one polymer that is made

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up of at least two different α -olefin units and at least one diene unit. Appellant can find no teaching or suggestion of such a polymer in either Koga or Dobashi, or in their combination.

On the top of page 4 of the Examiner's Answer, the Examiner states the following:

"Koga et al. teach the adhesive layer comprises a *copolymer of at least two different α -olefins* having 2 to 12 carbon atoms, the α -olefin copolymer content is 15-70 mol% of any single α -olefin, and at least one further diene comonomer."

[Emphasis added.] However, Appellant submits that Koga teaches a copolymer based on at least two different α -olefins (at page 3, lines 7-8), but does not appear to teach anywhere that such copolymer can be formed from diene comonomers as well.

Koga does mention dienes to be "incorporated in the adhesive layer" at page 4, lines 43-50. However, this is not the same as teaching that the diene is part of the same polymer molecule along with the at least two different α -olefins. Rather, these dienes are *separate polymers* from the "copolymer of at least two different α -olefins." The diene copolymers are added to the adhesive layer along with the "copolymer of at least two different α -olefins," but the dienes are not used as monomers, and are not copolymerized with the two different α -olefin monomers to form a polymer made up of at least two different α -olefin units and at least one diene unit. Consequently, the Examiner is incorrect when he describes Koga as teaching a copolymer of at least two different α -olefins and at least one further diene comonomer. Since the instant claims require a copolymer of at least two different α -olefins and at least one further diene comonomer,

and this is neither taught nor suggested by the combination of Koga and Dobashi, the combination of Koga and Dobashi fails to make out a *prima facie* case of obviousness.

Further support for Appellant's position can be gleaned from Koga's Example 6. Koga teaches at page 4, lines 43-50, that examples of styrene-diene based copolymers include styrene-ethylene-butylene-styrene block copolymers (SEBS) and styrene-isoprene-styrene block copolymers (SIS).¹ Koga's Example 6 shows an adhesive layer formed by simple mixing of preformed polymers, the preformed polymers being a propylene/1-butene/4-methyl-1-pentene copolymer, an ethylene-propylene copolymer, SEBS and SIS. Nowhere is there any teaching or suggestion that two different α -olefin *monomers* are polymerized with a diene *comonomer* to form a polymer that has two different α -olefin units and also diene units. Consequently, as noted above, the combination of Koga and Dobashi fails to make out a *prima facie* case of the obviousness of the instant claims.

At the top of page 7 of the Examiner's Answer, the Examiner says Appellant has "not compared the closest prior art. * * * [N]one of the comparison examples consists only of propene and ethylene." In response, Appellant points out that none of the examples in the prior art consists only of propene and ethylene, and, therefore, Appellant had no obligation to test against species not actually taught in the prior art. *See, In re Geiger*, 2 USPQ2d 1276, 1279

¹ Koga's SEBS and SIS do not themselves meet the terms of the instant claims. The ethylene and butylenes in SEBS apparently combines to make Koga's diene in SEBS. Even if styrene could be considered an α -olefin, the presence of two styrene groups violates the requirement of two different α -olefins. In SIS, the isoprene group is itself a diene, but, again, the presence of the two styrene groups violates the requirement of two different α -olefins. Consequently, Koga's SEBS and SIS do not themselves meet the terms of the instant claims, and in order for this rejection to be proper, there must be some teaching or suggestion in the combination of Koga and Dobashi of a copolymer of two different α -olefins and a diene comonomer. The Examiner has not pointed to any such teaching or suggestion.

(Fed. Cir. 1987) (unpublished) (concurring opinion of Judge Newman: "It is not required that the claimed invention be compared with subject matter that does not exist in the prior art. The applicant is not required to create prior art, nor to prove that his invention would have been obvious if the prior art were different than it actually was."); and *Ex parte Westphal et al.*, 223 USPQ 630, 633 (BPAI 1983) ("The latter compounds are not exemplified in the [cited reference,] and appellants were fully justified in testing the closest compounds actually taught in the reference.")

Koga's examples are summarized in Table 1 on page 9 thereof. It should be clear that in none of Koga's examples does the α -olefinic copolymer consist of only propene and ethylene. Koga's Examples 1-4 have a copolymer comprising various amounts of propylene, 1-butene and 4-methyl-1-pentene. Koga's Examples 5 and 6 have one copolymer consisting of propene and ethylene, but this is mixed with another copolymer comprising again propylene, 1-butene and 4-methyl-1-pentene. In short, no prior art example involves only propene and ethylene, and, thus, Appellant had no obligation to test against such a species not actually taught in the prior art.

On the other hand, Appellant submits that the data of record are sufficient to permit a conclusion that the polymerization with the diene confers an unexpected advantage. Instant Comparison Examples 1-3 all have formulations that are very close to Inventive Examples 1-4. In each of Comparison Examples 1-3, the copolymer is formed only of α -olefins. Comparison Example 3 has a content of ethylene and propene, and then a small content of butene. Importantly, Koga suggests that this small content of butene should not make a difference. Thus,

Koga teaches that his α -olefin copolymer is “based on *at least* two α -olefins.” The inclusion of a third α -olefin in instant Comparative Example 3, especially in small quantity, would not be expected to be significant. Indeed, the results obtained are the same as in instant Comparative Example 1, which has only ethylene and butene, i.e.: Severe paint deformation.

What the data submitted show is that one can vary the α -olefin contents and types in the prior art over a wide range, but will still be confronted with problems respecting either the bonding or paint deformation. However, as the Inventive Examples show, if you vary the α -olefin content over a range, you will not suffer any defects as long as the copolymer includes a diene comonomer. Respectfully, these results establish the criticality of the diene component, and are not taught nor suggested by the combination of Koga and Dobashi.

At the top of page 8 of the Examiner's Answer, the Examiner says Koga “expressly [teaches] the adhesive composition includes a diene.” Appellants submit that a diene is only optional, and, moreover, as noted above, the diene is provided as a separate copolymer, and not as a part of the “copolymer of at least two different α -olefins.” Thus, the Examiner concedes that the SEBS range is “0-50 wt%, preferably 0-45 wt%,” and the SIS range is “0-50 wt%, preferably 0-30 wt%.” The fact that zero wt% is a possibility proves that the diene need not be included. Indeed, only Koga's Example 6 has either of these components. Koga's Examples 1-5 do not contain any diene copolymer, and, thus, the Examiner's position that Koga requires a diene is incorrect. The fact that Koga teaches the diene is optional, and then is provided as a separate copolymer, and not as a part of the “copolymer of at least two different α -olefins,” proves that

Koga did not have possession of, and, therefore, could not teach nor suggest to persons skilled in the art the advantages of forming and using a copolymer of at least two different α -olefins and a diene comonomer, as presently claimed.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Appellant respectfully requests that this be considered a petition therefor. The Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Conclusion

For the reasons advanced in Appellant's Brief on Appeal in conjunction with the reasons advanced above, Appellant respectfully requests that the final rejection be reversed.

Respectfully submitted,
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